

REMARKS

Claims 1-6, 8-16 and 18 are all of the claims currently pending in this application after entry of the foregoing amendments, wherein claims 7 and 17 were cancelled.

PRELIMINARY MATTER:

In lines 8 and 9 on page 3 in the Office Action, the Examiner notes that the “first cathode” and “second cathode” do not have antecedent basis. Thus, Applicants hereby amend claim 12 to overcome the rejection. Accordingly, Applicants respectfully request that this rejection be withdrawn.

35 U.S.C. §102(b):

Claims 1, 7-14, 16 and 17 are rejected under 35 U.S.C. §102(b) as being anticipated by Japan 05-087773 (hereinafter “JP ‘773”). Applicants respectfully traverse this rejection in view of the following remarks.

In making the present rejection, the Examiner turns to JP ‘773 (paragraph 12) and asserts that this reference discloses a sensor where current is restricted by an oxygen density and a diffusion capacity of the diffusion barrier. The Examiner then asserts that oxygen density is directly related to partial pressure and that the current disclosed in JP ‘773 will vary with pressures of a measurement gas. The Examiner makes these assertions based on the machine translated English language version of JP ‘773 that he supplied with the present Office Action. For clarification, Applicants note for example that the machine translation “[s]ince applied voltage V is controlled by the gas induction 26” is not proper. In particular, when properly translated, lines 9-11 of JP ‘773 read as follows:

“With the applied voltage in a range from V1 to V2, the oxygen diffusion capacity into the cathode 22 (32) is controlled with the gas induction 26 of the cathode 22 (32). The oxygen diffusion capacity is limited according to the oxygen density in the measured gas. The thus limited oxygen diffusion capacity may also limit the current, namely, cause a diffusion limit current I_{L1} featuring the first flat part F1 (in Fig. 5).”

Rejections under 35 U.S.C. §102(b) are proper only when the applied reference teaches each feature recited in the claims. JP ‘773 fails to disclose each feature recited in amended claims 1 and 16. Instead, JP ‘773 is directed to a gas sensor that is operable to measure two different kinds of gas concentrations. This reference mentions how the prior art initially required one sensor to measure, for example, the concentration of oxygen and another sensor to measure a water vapor content. However, this reference fails to disclose, teach or suggest the claimed unique and novel device that is operable to use a sensor to measure pressure using the features recited in the claims and noted in the specification. Such features allow for measurements to be taken in various environments (see, for example, the first full paragraph of page 10 in the present specification).

More specifically, JP ‘773 fails to disclose a plurality of cathodes that are used as different pressure dependency electrodes where each of the different pressure dependency electrodes correspond to respective means for controlling the gas diffusion. Also, JP ‘773 does not disclose the means for controlling the gas diffusion that are adjusted in terms of gas diffusion

resistance to make a difference between the corresponding different pressure dependency electrodes in terms of pressure dependency of the oxygen pumping current to be outputted. Further, JP '773 does not disclose that information pertaining to the pressure of the measurement gas is generated based on oxygen pumping current output from each of the different pressure dependency electrodes.

Accordingly, Applicants respectfully submit that JP '773 fails to teach or suggest the features of amended claims 1 and 16, and request that the rejection of these claims under 35 U.S.C. §102(b) be withdrawn. The rejection of dependent claims 8-14 should also be withdrawn at least by virtue of these claims respectively depending from independent claims 1 and 16.

35 U.S.C. §103(a):

Claims 1, 7-14, 16 and 17

Claims 1, 7-14, 16 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over JP '773 in view of Friese et al. (U.S. Patent 5,368,713 [[hereinafter "Friese"]]). Applicants respectfully traverse this rejection in view of the following remarks.

Rejections under 35 U.S.C. §103(a) are proper only when combined references teach or suggest each feature recited in the claims. The combination of JP '773 and Friese fails to disclose each feature recited in the claims. In particular, as noted above, JP '773 fails to disclose the features recited in amended independent claims 1 and 16.

Friese is directed to a layer system for exhaust gas sensors. The reference fails to disclose the features recited in independent claims 1 and 16. Accordingly, Applicants respectfully submit that the combination of JP '773 and Friese fails to disclose each feature recited in claims

1 and 16, and request that the rejection under 35 U.S.C. §103(a) be withdrawn. Dependent claims 8-14 are also patentable over the applied references at least by virtue of their dependency on independent claim 1.

Claims 15 and 18:

Claims 15 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over JP '773 with or without Friese, in view of Kato et al. (U.S. Patent 5,866,799 [[hereinafter "Kato"]]). Applicants respectfully traverse this rejection in view of the following remarks.

As noted above, JP '773 fails to disclose the features of claims 1 and 16. Kato is drawn to a sensing device for measuring a gas concentration. However, this reference fails to teach or suggest features of claims 1 and 16. Accordingly, the combination of JP '773, Friese and Kato fails to teach or suggest all of the features recited in independent claims 1 and 16. Thus, Applicants respectfully request that the rejection of dependent claims 15 and 18 be withdrawn at least by virtue of these claims respectively depending from independent claims 1 and 16.

Claims 5 and 6:

Claims 5 and 6 are rejected under 35 U.S.C. §103(a) as being unpatentable in view of JP '773, in view of Friese and Radford et al. (U.S. Patent 3,843,400 [[hereinafter "Radford"]]). Applicants respectfully traverse this rejection in view of the following remarks.

As noted above, JP '773 and Friese fail to teach or suggest the features of independent claims 1 and 16. Radford is directed to an electrolyte cell, which also fails to also teach or suggest the features of claims 1 and 16. Thus, the combination of these references fails to teach or suggest the features of at least independent claims 1 and 16, and the rejection of claims 5 and

6 under 35 U.S.C. §103(a) should be withdrawn at least by virtue of claims 5 and 6 respectively depending from independent claims 1 and 16.

Claims 3 and 4:

Claims 3 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over JP ‘773 in view of Frieze and Kimura et al (U.S. Patent 4,224,113 [[hereinafter “Kimura”]]). Applicants respectfully traverse this rejection in view of the following remarks.

As noted above, JP ‘773 and Frieze fail to teach or suggest the features of amended claims 1 and 16. Kimura is directed to a method of detecting air/fuel ratios of a combustion engine. However, Kimura fails to teach or suggest the features of claims 1 and 16 at least in regard to the plurality of cathodes having the claimed features. Thus, the combination of JP ‘773, Frieze and Kimura fails to teach or suggest each feature recited in the claims, and the rejection of claims 3 and 4 under 35 U.S.C. §103(a) should be withdrawn at least by virtue of these claims depending on independent claims 1 and 16.

Claims 5 and 6:

Claims 5 and 6 are rejected under 35 U.S.C. §103(a) as being unpatentable over JP ‘773 in view of Frieze, Kimura and Radford. Applicants respectfully traverse this rejection in view of the following remarks.

As noted above, JP ‘773, Frieze, Kimura and Radford fail to disclose the features recited in independent claims 1 and 16. Accordingly, the combination thereof fails to teach or suggest all the features recited in claims 1 and 16. Thus, claims 5 and 16 are patentable over these refer-

AMENDMENT UNDER 37 C.F.R. §1.116
U.S. SERIAL NO. 09/818,528

ART UNIT 1753
Q63199

ences at least by virtue of them depending from independent claims 1 and 16, and the rejection thereof under 35 U.S.C. §103(a) should be withdrawn.

In view of the preceding amendments and remarks, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue that the Examiner feels may be best resolved through a personal or telephonic interview, the Examiner is kindly requested to contact the undersigned attorney at the local telephone number listed below.

A Petition for Extension of Time with appropriate fee accompanies this document. The USPTO is directed and authorized to charge all additional required fees (except the Issue Fee and/or the Publication Fee) to our Deposit Account No. 19-4880. Please also credit any overpayment to said Deposit Account.

Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER



Daniel V. Williams
Registration No. 45,221

Date: December 1, 2003